Televizionnyy priyemnik KVN-49 izd. 3-e, perer. i dop.

corresponding carriers 5.06 m and 4.56 m. The receivers are built for three channels, the third being 3.88 m for pictures and 3.58 for sound carriers. Production of the KVN-49 receivers was supposed to reach 325,000 sets in 1954 and 760,000 in 1955.

Table of Contents

Televizionnyy priyemnik KVN-49 izd. 3-e , perer. i dop.

available in the US. It is well illustrated and contains several detailed connection diagrams.

TEXT DATA

Coverage: The book consists of two parts: the first part contains basic information about TV receivers in general and the KVN-49 type in particular, as well as basic information about their operation and control. The second part contains detailed descriptions of the connection diagrams of all the KVN-49 TV receivers and descriptions of the individual elements and of their maintenance and operation. It also gives a detailed list of possible defects and ways of eliminating them. In the appendices antennas for TV reception are described and illustrated and winding data and normal operating conditions of all types of the KVN-49 TV receiver are given. The author says that at the present time (1954) there are three TV broadcasting stations in the USSR: Moscow, Leningrad and Kiyev. Other stations are expected to be built in the near future. The first two stations broadcast on the first channel, corresponding to a 6.03 m picture carrier wave length and 5.33 m sound carrier wave length. The Kiyev station broadcasts on the second channel, with the

ZAYTSEV, V. F.

PHASE X TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 689 - X

BOOK

Author: ZAYTSEV, V. F. Call No.: AF645588

Full Title: TELEVISION RECEIVER KVN-49, 3rd edition, revised and supplemented

Transliterated Title: Televizionnyy priyemnik KVN-49, izd. 3-e, perer. i dop.

PUBLISHING DATA

Originating Agency: None

Publishing House: State Publishing House of Communications and Radio Literature ("SVYAZ'IZDAT")

Date: 1954 No. pp.: 84 No. of copies: 100,000

Editorial Staff: None

PURPOSE AND EVALUATION: The book is written to teach television receiver users how to operate correctly the KVN-49 type receiver, most popular in the USSR, and also how to eliminate possible defects. The book is divided into two parts: the first is intended for users with no technical preparation and contains general information about the structure, operation and control of TV receivers; the second part is written for radio and TV fans who have a technical knowledge of the subject as well as for persons whose occupation is the maintenance and repair of TV sets. The book can be compared with several popular manuals for TV fans

1/5

ZAYTSEV, V. F

Televizionnyy priyemnik KVN-49 (Television receiver KVN-49(Izd. 2, perer. I dop. Moskva, Svyazizdat, 1952. 77 p. Illus., Diagrs., tables.

N/5
653.221
.Z3
1952

ZAYTSEV, V.F.

New and rare Palearctic species of the genue Spongostylum Macq. (Diptera, Bombyliidae). Ent. obozr. 40 no.2:413-428 '61.
(MIRA 14:6)

(Bee flies)

ZAITSEV, V. F.

Televizionnyy priyemnik "KVN-49" [Television receiver "KVN-49"]. Moskva, Oborongiz, 1951. 80 p.

SO Soviet Transportation and Communication, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

ZAYTSEV, V.F.; POKROVSKAYA, N.N. (Moskva)

Acute myeloblastosis with multiple thromboses. Klin.med. 37 no.1: 117-121 Ja '59. (MIRA 12:3)

1. Iz gospital'noy terapevticheskoy kliniki (dir. - prof. P.Ye. Lukomskiy) II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova i patologo-anatomicheskogo otdeleniya (nauchnyy konsul'tant - prof. P.B. Dvizhkov) 5-y Gorodskoy klinicheskoy bol'nitsy.

(LEUKOSARCOMA, case reports
acute, with multiple thrombosis (Rus))
(THROMBOSIS, case reports
multiple, in acute leukosarcoma (Rus))

MEZHEBOVSKIY, Rafail Grigor'yevich, prof.; ZAYTSEV, V.F., red.;
MATVEYEVA, M.M., tekhn. red.

[Treatment and prevention of cardiac insufficiency] Lechenie i profilaktika serdechnoi nedostatochnosti. 2. izd., dop. i ispr. Moskva, Medgiz, 1963. 351 p. (MIRA 16:9)
(HEART--DISEASES)

ZAYTSEV, V.F.

Bee flies (Diptera, Bombyliidae) of Transcaucasia [with summary in English]. Ent. oboz. 37 no.1:200-205 '58. (MIRA 11:3)

1. Kafedra entomologii Moskovskogo gosudarstvennogo universiteta.
(Transcaucasia--Bee flies)

ZAYTSEV, V.F.

ACTH in rheumatoid polyarthritis and some other diseases. Sov.med. 20 no.11:37-43 N '56. (MLRA 10:1)

1. Iz gospital'noy terapevticheskoy kliniki (dir. - prof. P.Ye. Lukomskiy) lechebnogo fakul'teta II Moskovskogo med. inst. imeni I.V.Stalina.

(ARTHRITIS, RHEUMATOID, ther.
ACTH)
(ACTH, ther. use
rheum. arthritis)

ZAYTSEV, V.F.

New species of beetles (Diptera, Bombyliidae) from Kazakhstan.
Trudy Zool. Inst. 31:282-285 '64. (MIRA 18:2)

TRUKHIN, A.Kh., inzh.; ZAYTSEV, V.F., inzh.

Welded parts in piston compressors. Mashinostroenie no.5:
48-49 S-O '65. (MIRA 18:9)

ZAYTSEV, V.F.; MYASNIKOV, L.A.; SHEYKMAN, M.B.

Effect of ascorbic acid on the distribution of 4 C^{14}-labeled cholesterol in tissues in experimental atherosclerosis. Kardiologiia 4 no.6:30-34 N-D '64. (MIRA 18:8)

1. Institut terapii (direktor - prof. A.L.Myasnikov) AMN SSSR, Moskva.

ZAYTSEV, V.F.

Change in the leukocyte count and leukocyte formula after a single administration of ACTH. Sov.med. 23 no.11:35-42 N '59.
(MIRA 13:3)

1. Iz gospital'noy terapevticheskoy kliniki (zaveduyushchiy - prof. P.Ye. Lukomskiy) II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova.

(CORTICOTROPIN pharmacol.)
(LEUKOCYTE COUNT pharmacol.)

ZAYTSEV, V. F.

Television set KVN-49. Izd. 2., perer. i dop. Moskva,
Gos. izd-vo lit-ry po voprosam sviazi i radio, 1952.
78 p. (53-16781)

TK6653.Z2 1952

ZAYTSEV, V. F.

Founding

Pneumatic vitro-press molding machines. Lit. proizv. No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

1. ZAYTSEV, V.F., YUDILEVICH, M.M.

2. USSR (600)

4. Water - Analysis

7. Syphon for taking water samples in determing oxygen content. Izv. VTI 21 no. 12 1952

9. Monthly List of Russian Accessions, Library of Congress, March, 1953. Unclassified.

ZAYTSEV, V.F., inzh.; YAVICH, S.M., inzh.

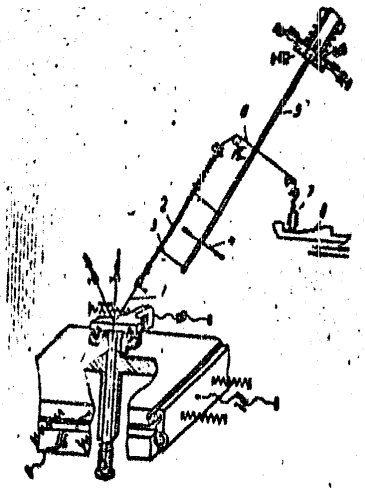
Electrochemical deoxydation of feedwater. Prom. energ. 17 no.12
18-21 D '62. (MIRA 16:1)

MYASNIKOV, L.A.; ZAYTSEV, V.F.

Effect of thyroidin on the distribution of 4-C^{14}-cholesterol in experimental atherosclerosis. Kardiologiia 2 no.6:31-37 N-D'62. (MIRA 17:8)

1. Iz Instituta terapii (dir. - deystvitel'nyy chlen AMN SSSR prof. A.L. Myasnikov) AMN SSSR.

ACC NR: AP7009069



1--feeler; 2--holder; 3--flat springs; 4--diaphragm; 5--bar; 6--flexible cable; 7--rod; 8--slider

SUB CODE: 14, 09/ SUBM DATE: 06Dec65

Card 2/2

ACC NR: AP7009069 (N) SOURCE CODE: UR/0413/67/000/003/0043/0043

INVENTOR: Zaytsev, V. G.; Tarilov, V. N.; Pimenov, Yu. A.

ORG: None

TITLE: A measurement probe. Class 21, No. 190956

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1967, 43

TOPIC TAGS: electronic measurement, electric measuring instrument

ABSTRACT: This Author's Certificate introduces a measurement probe made in the form of a spring-loaded needle feeler equipped with a feed mechanism for putting the feeler in contact with the element to be measured, e. g. solid circuit contact areas. To improve accuracy in locating the feeler, the feed mechanism is equipped with a holder which is connected by flat springs to a bar suspended on a diaphragm, and simultaneously coupled through a flexible cable to a spring-loaded rod resting against a slider which controls longitudinal motion of the feeler.

Card 1/2

UDC: 621.317.729.2

ZAYTSEV, V.G.

Operation of service stations. Neftianik 6 no.11:17-18 N '61.
(MIRA 14:12)

1. Glavnyy inzh. Saratovskogo upravleniya Glavneftesnaba RSFSR.
(Saratov--Service stations)

ZAYTSEV, V.D.

"Cost of electric power and heat". Elek. sta. 29 no.10:95-96 O '58.
(Power engineering) (MIRA 11:11)

DZHAMALOV, O.B., doktor ekon.nauk, prof., otv. red.; BEDRINTSEV, K.N., doktor ekon. nauk, red.; ZAYTSEV, V.D., kand. ekon. nauk, red.; KHODZHAYEV, S.M., kand. ekon. nauk, red.; DESYATNIK, F.M., red.

[Problems of the economic development of Uzbekistan] Problemy razvitiia ekonomiki Uzbekistana. Tashkent, Izd-vo AN UzSSR, 1963. 222 p. (MIRA 17:11)

1. Akademiya nauk Uzbekskoy SSR, Tashkent. Institut ekonomiki. 2. Chlen-korrespondent AN Uzbek.SSR (for Bedrintsev).

ZAYTSEV, V.B., doktor tekhn. nauk (Krasnodar)

Quantitative characteristics of the relief in leveling land for rice. Gidr. i mel. 17 no.10:20-24 O '65. (MIRA 18:10)

ZAYTSEV, V.B., kand.sel'khoz. nauk (g.Krasnodar)

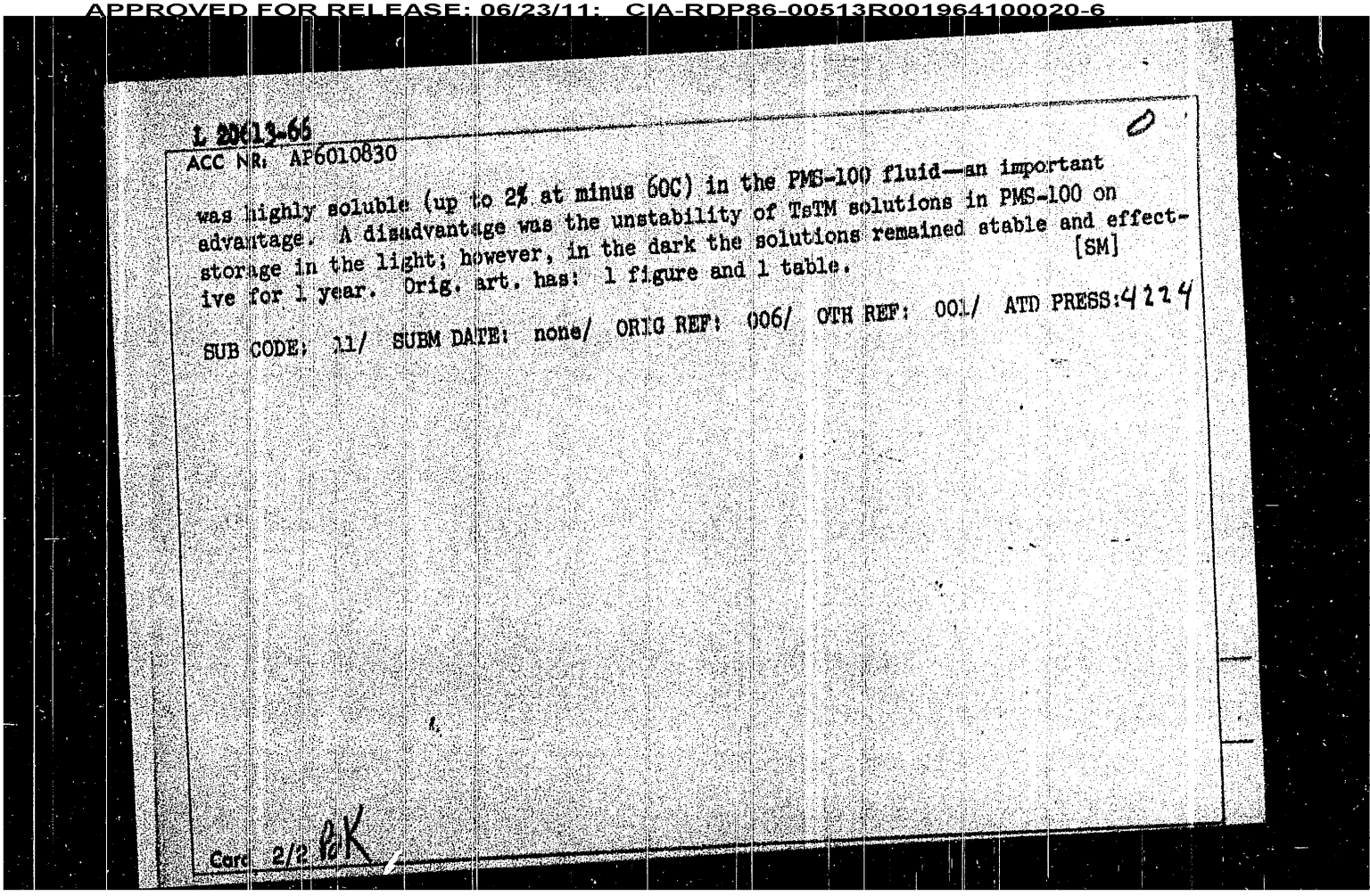
Some problems in planning rice irrigation systems. Gidr. i mel. 13 no.9:33-41 S '61. (MIRA 14:9)
(Kuban--Rice--Irrigation)

ZAYTSEV, V.B., kand. sel'skokhoz. nauk (Krasnodar)

Some problems of the development of rice irrigation in the Northern Caucasus. Gidr. i mel. 15 no.12:3-17 D '63. (MIRA 17:2)

SMETANIN, A.P., kand. sel'khoz. nauk; KIRICHENKO, K.S., kand. sel'khoz. nauk; ZAYTSEV, V.B., kand. sel'khoz. nauk; ALEKSANDROV, M.A.; ORLOVA, V.P., red.

[Rice cultivation on the "Slavianskii" State Farm; based on experience with M.E.Baranova's group] Vozdelyvanie risa v sovkhoze "Slavianskii"; na opyte zvena M.E.Baranovoi. Moskva, Kolos, 1965. 129 p. (MIRA 18:7)



L 20613-66
ACC NR: AP6010830

was highly soluble (up to 2% at minus 60C) in the PMS-100 fluid—an important advantage. A disadvantage was the unstability of TsTM solutions in PMS-100 on storage in the light; however, in the dark the solutions remained stable and effective for 1 year. Orig. art. has: 1 figure and 1 table. [SM]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 006/ OTH REF: 001/ ATD PRESS:4224

Card 2/2 pdK

L 2063-66 EWT(m)/T IJP(c)

ACC NR: AP6010830 (A) SOURCE CODE: UR/0065/66/000/004/0047/0048

AUTHOR: Kobzova, R. I.; Tubyanskaya, G. S.; Oparina, Ye. M.; Zaytsev, V. A.; Yegorova, A. A.

ORG: VNIINP

TITLE: TsTM: a new effective stabilizer for silicone lubricants

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 4, 1966, 47-48

TOPIC TAGS: lubricant, lubricant additive, silicone lubricant, antioxidant additive

ABSTRACT: A study has been made of the antioxidant effectiveness of cyclopentadienyltricarbonylmanganese (designated TsTM in the source) in silicone lubricants. TsTM was found to surpass existing silicone antioxidants in stabilizing effectiveness and solubility. It is noted that prolonged service of silicone lubricants at 150—200C and above is normally rendered impossible by oxidation and polymerization and that existing antioxidant additives are insufficiently effective. The silicone lubricant used in this study was PMS-100 polydimethylsiloxane fluid (MRTU-6 No. Yel-230-61 specifications). The criterion of antioxidation effectiveness was the gelation time at 250—350C. TsTM was found to be a highly effective stabilizer of the PMS-100 fluid. At 250C the curve TsTM concentration versus effectiveness went through a maximum at 0.5%; at this maximum the gelation time was increased by a factor of 250. The optimum TsTM concentration was dependent on temperature. TsTM

UDC: 665.521.5:547'28

Card 1/2

L 40234-66
ACC NR: AP6019640

pounds are stable in a molten state. Orig. art. has: 1 table and 3 figures.

SUB CODE: 11/ SUBM DATE: 15Dec64/ ORIG REF: 008/ OTH REF: 006

Card 2/2 lo

L 40234-66 EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD/WW/JG

ACC NR: AP6019640 SOURCE CODE: UR/0149/66/000/003/0043/0045

AUTHOR: Gerasimenko, L. N.; Zaytsev, V. A.; Lozhkin, L. N.; Morachevskiy, A. G.

ORG: Department of Theoretical Principles of Metallurgy, Leningrad Polytechnic Institute (Leningradskiy politekhnicheskiy institut. Kafedra teoreticheskikh osnov metallurgii)

TITLE: Thermodynamic properties of liquid alloys of the zinc-antimony system

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 3, 1966, 43-45

TOPIC TAGS: zinc alloy, antimony alloy, alloy system, thermodynamic property, liquid metal

ABSTRACT: The thermodynamic properties of liquid alloys of the Zn-Sb system were investigated by the electromotive force (emf) method. Measurements were made in the temperature range 600—750C with N_{Zn} ranging from 0.1 to 0.9. From the emf values the partial molar thermodynamic characteristics of zinc were determined and the integral values of the change of the thermal potential, enthalpy, and entropy, upon the formation of one gram-atom of alloy from pure components in a liquid state were calculated by the Gibbs-Duhem equation. The investigation revealed that a complex S-shaped dependence of the excess partial entropy of zinc on the composition, which is characteristic for systems with a strong inner action between components in a liquid state, is observed for the system Zn-Sb and that the ZnSb com-

UDC: 669.5 + 669.75

Card 1/2

NESMEYANOV, A.N.; ZAYTSEV, V.A.; ANISIMOV, K.N.; LERNER, M.O.;
KOLOBOVA, N.Ye.; PORETSKAYA, A.P.; MAGOMEDOV, G.K.

Antidetonating effectiveness of some organic compounds of manganese. Neftekhnimiia 5 no.6:892-896 N-D '65. (MIRA 19:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR. Submitted Nov. 12, 1964.

NECHIPORENKO, V.G., kand.tekhn.nauk; PRIKHODCHENKO, P.P., inzh.; ZAYTSEV, V.A., inzh.; TSAPOV, V.P., inzh.; VERKHOTUROV, A.D., inzh.

Cutting worm spiral with a variable pitch and profile height of the turn. Mashinostroenie no.6:82-84 N-D '65. (MIRA 18:12)

ZAYTSEV, V.A.; LEDOKHOVICH, A.A.

Thermostatic testing unit. Priborostroenie no.3:21-22 Mr '61.
(MIRA 14:3)

(Thermometers--Testing)

ZAYTSEV, V.A., inzhener.

Water pump. Torf.prom.33 no.3:34-35 '56. (MIRA 9:7)

1. Smolevichskoye torfopredpriyatiye.
(Pumping machinery)

ZAYTSEV, V.A., inzh.; PIL'KEVICH, L.Ya., inzh.

Self-propelled welding unit. Gor. zhur. no.7:66-67 Jl '62. (MIRA 15:7)

1. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy nikelevoy promyshlennosti.
(Mining machinery)

VOINOV, A.I.; FASTOVA, K.N.; ZAYTSEV, V.A.; CHERNOV, N.P.

Investigating the effect of antiknock additives on processes preceding detonation in engines. Trudy Inst. dvig. no.6:82-93 '62. (MIRA 16:5)

(Gas and oil engines--Combustion)

ZAYTSEV, V. A., uchitel'

Mounting laboratory equipment on stands. Khim. v shkole 17 no.6:67-68 N-D '62. (MIRA 16:1)

1. Srednyaya shkola No. 6, Kineshma.

(Chemical laboratories--Equipment and supplies)

ZAYTSEV, V.A., kapitan 3-go ranga

Rules for the prevention of collissions at sea and radar on ships. (MIRA 16:2)
Mor.sbor. 46 no.2:53-55 F '63.
(Collisions at sea—Prevention)
(Radar in navigation)

ZAYTSEV, V.A.; LEDOKHOVICH, A.A.

Recording the water content of clouds. Trudy AANII 239:128-133 '62. (MIRA 16:8)

(Clouds) (Aeronautics in meteorology)

GALKIN, N.P.; SUDARIKOV, B.N.; ZAYTSEV, V.A.

Thermal effect of the interaction between uranium hexafluoride and ammonia. Trudy MKHTI no.43:64-66 '63.

(MIRA 17:10)

ZAYTSEV, V.A.

Methods of quantitative analysis of pharmaceutical preparations containing tertiary nitrogen; a brief review. Report No. 1. Apt. delo 11 no.4:59-61 Jl-Ag '62. (MIRA 17:11)

1. Tsentral'nyy aptechnyy nauchno-issledovatel'skiy institut.

L 29241-66
ACC NR: AP6019357

Times of the individual tests amounted to 22-24 hours. In the Zn-rich system ($N_{Zn} > 0.6$) the emf was reproduced with an accuracy of plus or minus 0.2 MV at a given temperature. Increased Ge content in the alloys lower the relative error value in determining emf value. Results of emf measurements and the calculated thermodynamic characteristics of the system are presented. Calculated values of heat of mixing are in satisfactory agreement with data derived from direct calorimetric measurements. Orig. art. has: 3 figures and 1 table. [VPR]

SUB CODE: 11, 20 / SUB DATE: 14Jul64 / ORIG REF: 001 / OTH REF: 003

Card 2/2

L 29241-66 EWT(m)/EWP(t)/ETI IJP(c) WW/JW/JD/JG

ACC NR: AP6019357 SOURCE CODE: UR/0149/66/000/001/0046/0048

AUTHOR: Gorshenkov, L. N.; Zaytsev, V. A.; Loshkin, L. N.; Moreshevskiy, A. G. 56 B

ORG: Department of Theoretical Fundamentals of Metallurgy, Leningrad Polytechnic Institute (Kafedra teoreticheskikh osnov metallurgii, Leningradskiy politekhnicheskiy institut)

TITLE: Thermodynamic properties of liquid alloys in the zinc-gallium system 50 27 27

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 1, 1966, 46-48

TOPIC TAGS: liquid metal, zinc alloy, gallium alloy, thermodynamics

ABSTRACT: The thermodynamic properties of the liquid alloys of the zinc-gallium system was studied by measuring the electromotive forces (emf) of the concentration bonds:

$$-Zn\,|\,(LiCl\text{-}KCl\text{-}NaCl)_{melt} + (1\ wt\ \%\ ZnCl_2)\,|\,Zn(N_{Zn}) + Ga(N_{Ga})\,+.$$

The emf was measured in the 450-550° range in many compositions (N_{Zn} = 0.1 - 0.9). The emf values served to determine the partial molar thermodynamic characteristics of zinc. The corresponding integral values for the Zn-Ga system were calculated with the Gibbs-Duhem equation.

UDC: 669.15+669.87

Card 1/2

L 2445-66
ACC NR: AT6009617

mensions of the recording, measuring, and rectifier units are 100 × 110 × 110, 220 × × 340 × 160, and 220 × 340 × 160 mm, respectively. The PTCTG apparatus was used by A. I. Voskresenskiy in 1962 at Mirnyy. The data obtained by previous investigators and the present study show that 1) the products of condensation are formed in the atmosphere at negative temperatures down to -70°C when there is maximum tension of water vapor over water; 2) water drops form and freeze into ice crystals; 3) the diameter of ice grains varies from 11 to 14 microns. Orig. art. has: 2 tables, 1 figure.

SUB CODE: 04/ SUBM DATE: 09May64/ ORIG REF: 009/ OTH REF: 001

Card 2/2 pda

L 24456-66 EWT(1)/FCC

ACC NR: AT6009617 SOURCE CODE: UR/2561/65/000/019/0015/0021

AUTHOR: Zaytsev, V. A.; Ladokhovich, A. A.

ORG: none

TITLE: The problem of atmospheric humidity measurement at low temperatures

SOURCE: Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. Problemy Arktiki i Antarktiki, no. 19, 1965, 15-21

TOPIC TAGS: atmospheric humidity, temperature measurement, meteorologic instrument

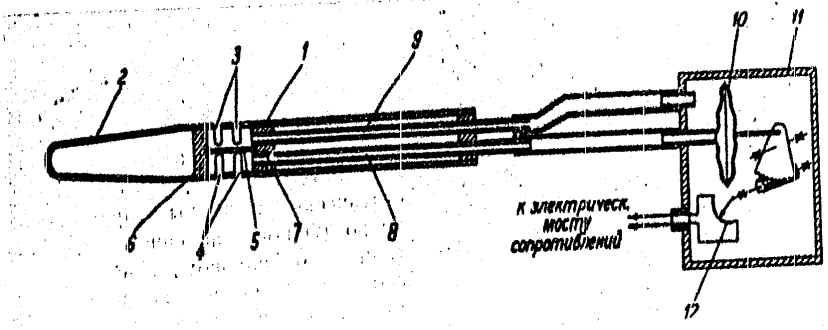
ABSTRACT: A simplified method of measuring atmospheric humidity at temperatures below 0° with a condensation hygrometer is described. A small condensation thermohygrometer was used and the condensation temperatures were measured by small temperature steps (0.1°/sec) in cooling the mirror. The measurements show that there is no precipitation of condensates on the mirror when there is vapor saturation over the surface of ice and that the precipitation of a condensate on the mirror always occurs at 100% water vapor humidity over water at rising or falling temperatures from -70 to 0° and 0° to 70°, respectively. The data served as a basis for designing a portable, remote controlled condensation thermohygrometer (PTCTG) consisting of three parts: a temperature and humidity recorder, a measuring device, and an ac rectifier. The di-

UDC: 551.508.71

Card 1/2

The measurement of the vertical components...

Fig. 1: Air pressure receiver of the IVP vertical air current meter
Legend: 1 - tube; 2 - nozzle; 3 and 4 - static gaps; 5 - bridge; 6 and 7 - face plugs; 8 and 9 - connecting pipes; 10 - manometric box; 11 - plastic airtight body; 12 - potentiometer



Card 6/6

30001
S/531/61/000/106/001/001
D039/D113

The measurement of the vertical components...

[Abstracters' note: The data of the test conducted on June 7, 1960, are not given]. There are 2 figures, 2 tables and 4 Soviet-bloc references.

Card 5/6

The measurement of the vertical components...

a considerable turbulence was observed up to 1,600 m, both over the lake and dry land. Test results showed that the vertical currents were most intense in the 50-m layer of ground air, where separate gusts reached 14 m/sec. The vertical current velocity decreased with altitude and nearness to the water surface. Over the lake, it was lower than over dry land and decreased with increasing distance from the shore and increasing lift height. The number of vertical air currents with a velocity of from 3 m/sec on, decreased with altitude and depended on the wind velocity and the base surface. Thus, on June 8, it averaged 1.5 per 1 km of the route in the 50-m ground layer, and at 500 m it was 0.13 per 1 km of the route. On June 10, the amount of vertical air currents was 7 and 1.5 per 1 km of the route, respectively at the same levels. Tests showed that the IVP meter operated completely satisfactorily. The readings of the device do not depend on the air speed of the aircraft. Combined with other instruments, it may give a clear picture of the atmospheric turbulence in the ground layer of air.

30001

S/531/61/000/106/001/001
D039/D113

The measurement of the vertical components...

conducted from 10.00 to 14.00 hrs when a northerly wind with a velocity of 2 m/sec. prevailed. The total amount of cumuli which formed at the beginning of the test, did not exceed 5 - 6 points over dry land; over the lake only patches of thin fog at up to 50 m altitude were observed. During atmospheric sounding, the vertical currents were mainly observed over dry land up to 850 - 900 m altitude in the morning and up to 1,200 m during the day. Preliminary results of measuring the vertical currents over dry land and water on June 8, 1960, showed that the most intense gustiness occurred over dry land and over a 50-m layer of ground air, 10-15 km from the shore line. There, the maximum vertical gusts reached 11 m/sec. Towards the lake, their intensity decreased and reached only 5 m/sec along a 5-km wide band. The vertical air currents were less intense over the 50-m strip than over dry land and amounted to 1m/sec. Vertical currents over the lake were observed only up to an altitude of 500 m. On June 10, 1960, the wind direction and velocity had changed; the wind force was up to 12 m/sec. and the wind direction was from dry land towards the lake. During test flights,

Card 3/6

The measurement of the vertical components...

wards. The longitudinal axis should be parallel to that of the aircraft. The IVP meter can measure the vertical wind velocity component from a limited space. It was tested on an ЛИ-2 (LI-2) aircraft during three separate flights made over the above-mentioned region on June 7, 8, 10, 1960. The data unit was placed right next to the receiver and the length of the air ducts did not exceed 1 m. The inertia of the whole system, including the recording instrument, was ±0.2 sec, and the sensitivity corresponded to 1 m/sec of the vertical current velocity. The tests also included the recording of pressure at flight level, air temperature, temperature pulsations and the aircraft overloads. All data were recorded on a phototape. The IVP meter was tested in the following way: the aircraft carried out level flight for 15-16 min at altitudes of 50, 100, 200 and 500 m from the level of the base surface, constant air speed and altitude being maintained. The flight took place over only one area, the course being perpendicular to the shoreline. Over each horizontal plane, the aircraft covered 25 km over dry land and 25 km over water. On June 8, 1960, the test was

30001
S/531/61/000/106/001/001
D039/D113

3,5800

AUTHORS: Zaytsev, V. A., and Ledokhovich, A. A.

TITLE: The measurement of the vertical components of wind velocities from an aircraft

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 106, 1961. Voprosy fiziki atmosfery, 62-68.

TEXT: A new device for measuring vertical wind current velocities is described and the results are given of an investigation of the horizontal and vertical distribution of these currents. The investigations were conducted during test flights over the Ladoga Lake area in 1960. The basic parts of the ИВП(IVP) vertical wind current meter, which was developed by the authors in 1960, are an air pressure receiver (Fig. 1), a manometric data unit with a potentiometer and an optical recording instrument. The operating principle of the device consists in measuring the velocity of a wind current moving downwards or upwards in relation to the aircraft. For measurements, the air pressure receiver has to be mounted on the aircraft's nose, so that one static chamber is turned upwards and the other one down-

Card 1/6

Aircraft flight conditions ...

shell is traceable to a height of 400 - 600 m vertically and for 1500 - 2000 m horizontally. In the cloud there are upwards directed accelerations wherever the air temperature is reduced and downwards directed ones wherever it is raised. On August 19, 1958, during a flight on the Moscow-Sverdlovsk route above Cb anvils, whose upper edge was located at a height of 10,500 - 10,600 m, the air temperature, at a height of 11,000 m, over the central parts of Cb exceeded the mean temperature of the surrounding air at the same level by 3.3 -4.9°. Above the anvils, especially at their edges, there were also places where the temperature was 1 - 2° lower than the average temperature at the flight level. The overloads did not exceed 0.3 - 0.4 g when flying over the anvils. The horizontal temperature gradient raches 1.5 - 2.0°/km above the summits of Cu cong and Cb. It is supposed that near the upper boundary of Cb, above their central part, the air temperature may be 8 - 10° higher in comparison with the surrounding air's temperature at the same height; and that descending air movements, caused by the break up of the summits of Cu cong, may reach 20 - 30 m/sec. Diagrams are given for the warm air envelope's disposition around Cu cong and above Cb. 3 references.
/Abstracter's note: Complete translation./

Card 2/2

lm163

S/169/62/000/009/078/120
D228/D307

3.5110

AUTHORS: Zaytsev, V. A. and Ledokhovich, A. A.

TITLE: Aircraft flight conditions near thick cumuli and cumulo-nimbi

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 9, 1962, 25, abstract 9B148 (In collection: Issled. oblakov, osadkov i grozovogo elektrichestva, M., AN SSSR, 1961, 140-146)

TEXT: The fact that around developing Cu cong there is a warm air envelope, from a few score to several hundred meters thick with a temperature contrast of 0.3 - 3° in comparison with the mean air temperature outside the cloud at the same height, was discovered by means of an aircraft shielded thermometer and a temperature pulsation meter during TY-104 (TU-104) aircraft flights near Sverdlovsk (on August 10, 1958). The warm air envelope has a thickness of 50 - 200 m and a temperature contrast of 0.3 - 0.5° at the cloud's base; in its middle parts (at an altitude of 2840 m) these quantities equal 100 - 700 m and 0.5 - 3° respectively. Above the cloud this

Card 1/2

S/262/62/000/022/006/007
E194/E135

11.6171

AUTHORS: Lerner, M.O., Zaytsev, V.A., and Aronov, D.M.

TITLE: New anti-knock additives

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk, Silovyye ustanovki, no.22, 1962, 50, abstract 42.22.331. (In collection: Ekspluat.-tekhn. svoystva i primeneniye avtomob. topliv, smazochn. materialov i spetszhidkostey, no.2, 1961, M., Avtotransizdat. 17-18)

TEXT: A new anti-knock additive type ЦТМ (TsTM), based on manganese, has been tested in respect of anti-knock effectiveness, anti-wear properties and the tendency to deposit formation. The results are given and are compared with the corresponding values of standard tetra-ethyl lead fluid Р-9 (R-9).

[Abstractor's note: Complete translation.]

Card 1/1

ZAERODSKIY, G.M.; ZAYTSEV, V.A.; LEDOKHOVICH, A.A.; TITOV, N.A.

Sounding at atmosphere from a TU-104 airplane. Trudy GGO no.104: 53-67 '60. (MIRA 13:10)

(Meteorological instruments) (Aeronautics in meteorology)
(Cloud physics)

to measure cloud transparency. The book contains 83 diagrams and 21 tables. There are 99 references: 92 Soviet, 5 English, and 2 German.

TABLE OF CONTENTS

PHASE I BOOK EXPLOITATION SOV/4376

Zaytsev, Vasiliy Aleksandrovich and Aleksey Aleksandrovich Ledokhovich

Pribory i metodika issledovaniya oblakov s samoleta (Instruments and Methods for Investigating Clouds From Aircraft). Leningrad, Gidrometeoizdat, 1960. 175 p. 3,000 copies printed.

Resp. Ed.: N. P. Fateyev; Ed.: V. S. Protopopov; Tech. Ed.: N. V. Volkov.

PURPOSE: This book is intended for meteorologists and aerologists.

COVERAGE: The book describes the instruments used in aircraft sounding to measure air temperature and humidity, temperature pulsations in and outside of clouds, the water content of clouds, the size of cloud droplets, and visibility. The methods and techniques of conducting measurements are explained. Examples of individual and complex measurements are given. G. M. Zabrodskiy wrote Ch. 7 in which he describes an instrument designed by himself

Card 1/6 ½

9.6100

S/112/60/000/020/001/004
A005/A001

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1960, No. 20, p. 16, # 4.14935

AUTHORS: Ledokhovich, A.A., Zaytsev, V.A.

TITLE: An Electric Aircraft Meteorograph (CM -1 (SEM-1))

PERIODICAL: Tr. Arkt. i antarkt. n.-i. in-ta, 1959, Vol. 228, pp. 162-167

TEXT: A device is described which consists of: the 4-galvanometer aircraft oscillograph K4-51 (K4-51), the shielded aircraft resistance thermometer with unbalanced bridge, and the pressure receiver HY-8202 (NU-8202). The device is provided for: recording the pressure, the temperature of the surrounding air, and the temperature fluctuations in clouds, out of the clouds, and the case of icing. The response of the SEM-1-device is two times greater than that of the meteorograph CM-43 (SM-43).

A.F.K.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

ZAYTSEV, V.A.; LEDOKHOVICH, A.A.

Temperature near the upper limit of stratus clouds and fogs developing within air masses. Trudy AANII 228:113-123 '59.
(MIRA 13:2)

(Artic regions--Cloud physics)
(Atmospheric temperature)

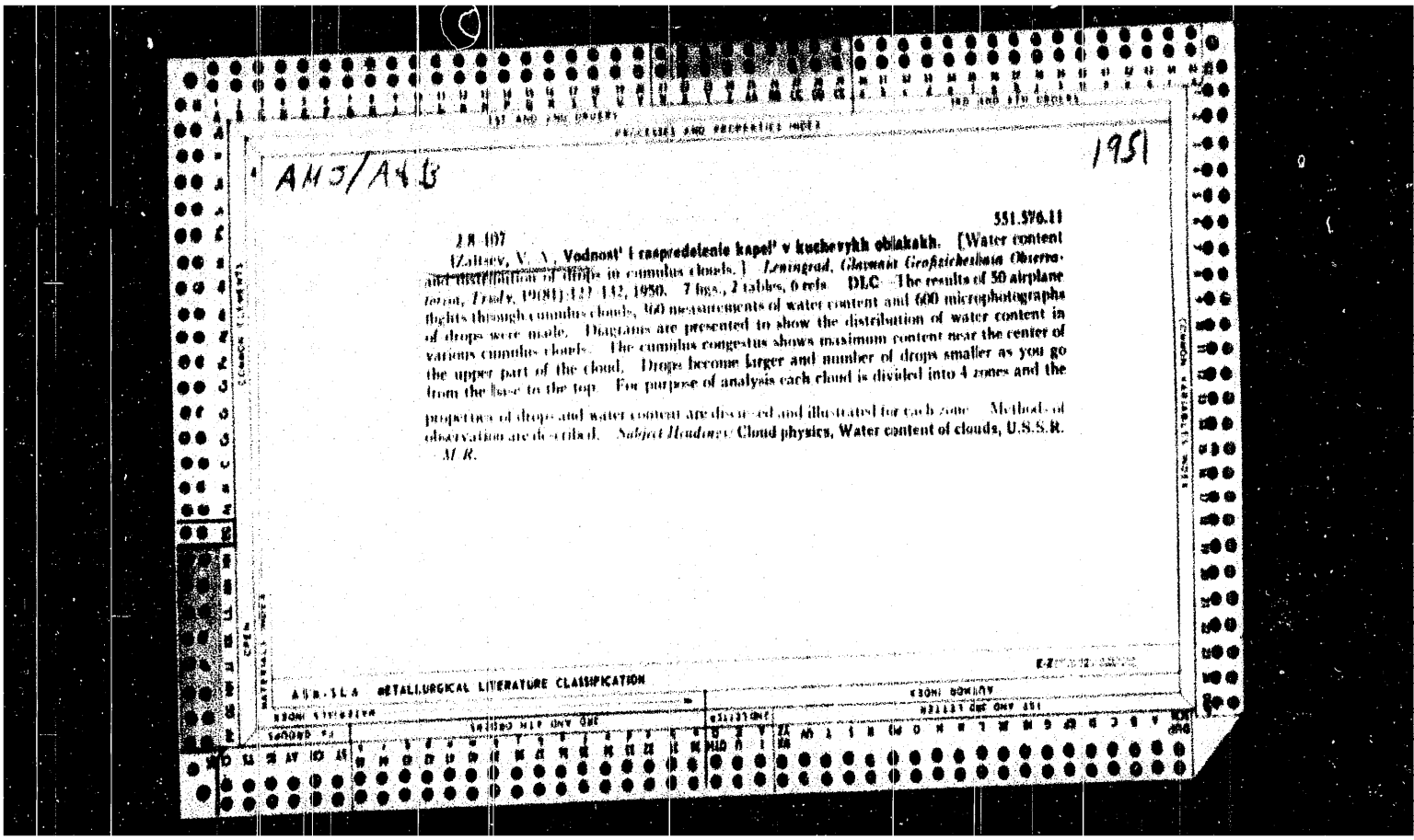
ZAYTSEV, V.A.

LEDOKHOVICH, A.A.; ZAYTSEV, V.A.

Remote measurement of temperature and humidity from an airplane.
Trudy GGO no.63:177-183 '56. (MLRA 10:5)
(Aeronautics in meteorology)

ZAYTSEV, V.A.; LEDOKHOVICH, A.A.

Effect of cloud and rain drops on atmospheric temperature measurement from an airplane. Meteor. i gidrol. no.6:41-44 Je '56. (MLRA 9:9)
(Atmospheric temperature)



AM3/AA3

1951

551.576.11

JA 107

[Zalesev, V. V.] **Vodnost' i raspredelenie kapel' v kuchevykh oblakakh.** [Water content and distribution of drops in cumulus clouds.] *Leningrad, Glavnaia Geofizicheskaia Observatoriia, Trudy*, 19(81):127-142, 1950. 7 figs., 2 tables, 6 refs. DLC. The results of 50 airplane flights through cumulus clouds, 600 measurements of water content and 600 microphotographs of drops were made. Diagrams are presented to show the distribution of water content in various cumulus clouds. The cumulus congestus shows maximum content near the center of the upper part of the cloud. Drops become larger and number of drops smaller as you go from the base to the top. For purpose of analysis each cloud is divided into 4 zones and the properties of drops and water content are discussed and illustrated for each zone. Methods of observation are described. *Subject Headings:* Cloud physics, Water content of clouds, U.S.S.R.

M.R.

A58-5L4 METALLURGICAL LITERATURE CLASSIFICATION

TAYTSEV, V.A.

New method for determining water density in clouds and fogs. Trudy GGO no.13:70-77 '48. (MLRA 10:1)
(Clouds) (Fog)

ZAYTSEV, V.A.

Size and distribution of drops in cumulus clouds. Trudy GGO no.13:19-29 '48. (MLRA 10:1)

(Clouds)

ZAYTSEV, V. A.

"The Method of Microphotographing Drops in a Fog and in Clouds," Trudy OGO, No 9 (71), 1948.

ZAYTSEV, V. A.

"Distribution of Condensation Centers According to Altitude During Days with Cumulus Clouds", Trudy GGO No 7, 1948 (1-3)

SO: U-3032, 11 Mar 1953

ACCESSION NR: AT4030533

also determined with the aid of standard equipment. The results are presented in tables and graphs. Schematics of the electrical thermometer and the vertical measurement device are presented. Tests on specific instruments were carried out in a TU-104 and IL-2. Orig. art. has: 2 tables and 4 figures.

ASSOCIATION: none

SUBMITTED: 18Feb63 DATE ACQ: 17Apr64 ENCL: 00

SUB CODE: AS, SD NO REF SOV: 003 OTHER: 001

Card 2/2

ACCESSION NR: AT4030533 S/0000/63/000/000/0106/0114

AUTHOR: Zabrodskiy, G. M.; Zaytsev, V. A.; Ledokhovich, A. A.

TITLE: Measuring temperature and vertical components of wind velocity from aircraft

SOURCE: Nauchnaya konferentsiya po aviatsionnoy meteorologii. Moscow, 1960. Materialy*. Moscow, Gidrometeoizdat, 1963, 106-114

TOPIC TAGS: temperature measurement, wind velocity, humidity, air pressure, water content, visibility, condensation nucleus, atmospheric electricity, TU-104 aircraft, IL-2 aircraft

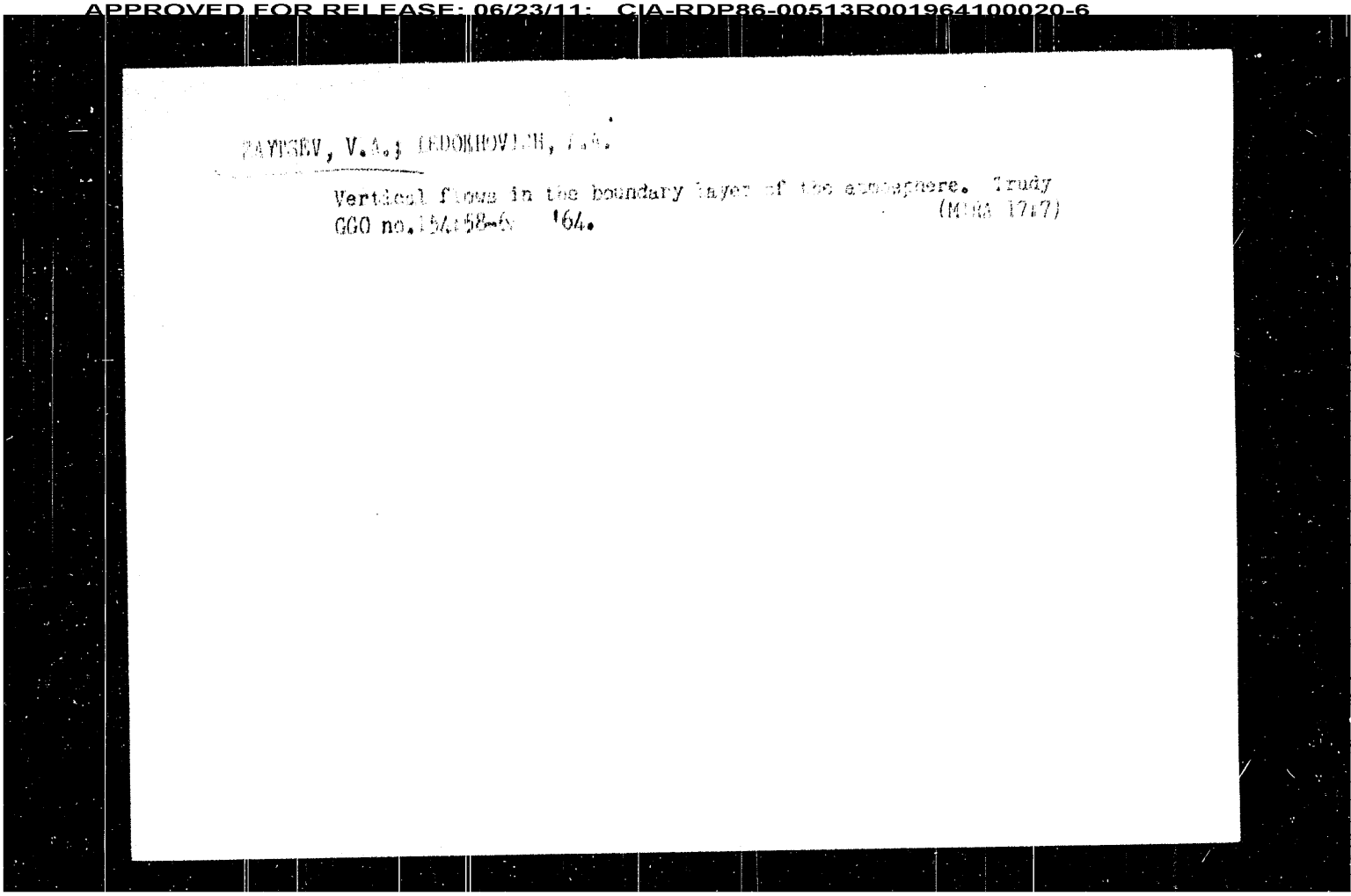
ABSTRACT: This paper is one of 13 previously unpublished reports of the 40 papers given at the Nauchnaya konferentsiya po voprosam aviatsionnoy meteorologii (scientific conference on problems of aviation meteorology) that was held in June and July of 1960 in Moscow at the Glavnoye upravleniye gidrometeorologicheskoy sluzhby* SSSR. In this paper, the authors present results from measuring the temperature, humidity and air pressure, temperature pulsation, water content and visibility in clouds, dimensions of cloud particles, condensation nuclei, the intensity of the atmospheric electrical field and the like from aircraft. In addition to these parameters, the air velocity of the aircraft, flight altitude, aircraft loads, and other values were

Card 1/2

ZAYTSEV, V.A.

Complexonometric determination of papaverine hydrochloride in multicomponent medicinal mixtures. Apt. delo 12 no.4: 45-48 Jl-Ag '63. (MIRA 17:2)

1. TSentral'nyy aptechnyy nauchno-issledovatel'skiy institut.



GAYEVSEV, V.A.; LEDOKHOVICH, A.S.

Vertical flows in the boundary layer of the atmosphere. Trudy GGO no.154:58-65 '64. (MIRA 17:7)

ZAYTSEV, V.A.; LEDOKHOVICH, A.A.

Measurement of the atmospheric pressure using an electric hypsothermometer. Trudy AANII 239:139-143 '62. (MIRA 16:8)
(Atmospheric pressure--Measurement)

ACCESSION NR: AT4043158 ENCLOSURE: 01

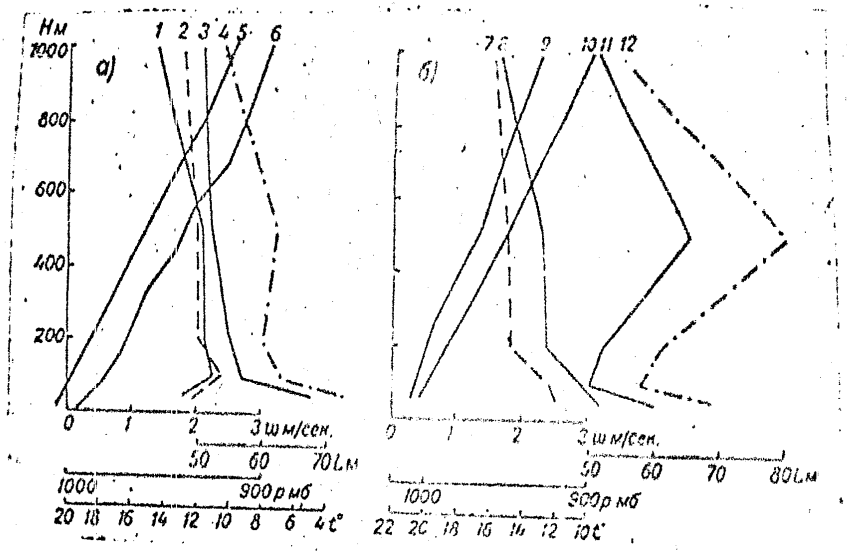


Fig. 1. Vertical distribution of pressure, temperature, velocity and horizontal extent of vertical currents on June 8 (a) and 10 (b), 1960. 1, 8 -- mean values of velocity of descending currents (m/sec); 2, 7 -- mean velocities of ascending currents (m/sec); 3, 11 -- mean values of horizontal extent of descending currents (m); 4, 12 -- mean values of horizontal extent of ascending currents (m); 5, 10 -- air pressure (mb); 6, 9 -- air temperature (degrees).

Card 4/4

ACCESSION NR: AT4043158

series of eddies with a diameter of 120-180 m, or vertical currents with a mean horizontal extent of 60-80 m. The secondary layer of eddies apparently can be carried by the general horizontal wind flow for considerable distances from the place of formation. Ascending currents move an almost identical quantity of air over both the land and the water. At heights of 50 and 100 m in the surface layer, and at greater heights in mountainous regions, the velocity of the vertical currents is close to the wind velocity at the earth's surface. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya (Main Geophysical Observatory)

SUBMITTED: 00 ENCL: 01

SUB CODE: ES NO REF SOV: 006 OTHER: 000

Card 3/4

ACCESSION NR: AT4043158

for about 15 minutes at each of the levels 50, 100, 200, 500 and 1,000 m above the underlying surface. Each flight was 25 km over water and 25 km over land. Two flights during different synoptic situations are described in detail: the wind regime and vertical temperature gradient were different (see Fig. 1 of the Enclosure). On June 8 the vertical air currents developed as a result of thermal convection, whereas on June 10 the vertical currents were the result of dynamic turbulence and convection. An analysis of these cases leads to the conclusion that ascending air currents in the surface layer of the atmosphere have a greater horizontal extent L than the descending currents. The velocity of the vertical currents is dependent on the distribution of the vertical temperature gradient and wind velocity at the earth's surface. In the case of superadiabatic gradients and a small wind velocity at the surface, the ascending currents possess a greater vertical velocity than the descending currents. When γ 1°/100 m and the wind velocity at the surface is considerable, the descending air currents have a greater vertical velocity than the ascending currents. There is a basis for assuming that, in the lower 100-m surface layer, regardless of weather conditions and the local relief, the vertical currents develop with a mean horizontal extent of about 50-60 m or as a primary series of eddies with a diameter of 100-120 m. In the atmospheric layer from 100 to 500 m there is a secondary

Card 2/4

ACCESSION NR: AT4043158 S/2531/64/000/154/0058/0064

AUTHOR: Zaytsev, V.A., Ledokhovich, A. A.

TITLE: Vertical currents in the boundary layer of air

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy* no. 154, Voprosy* fiziki atmosfery* (Problems in atmospheric physics), 58-64

TOPIC TAGS: meteorology, atmospheric boundary layer, atmospheric physics, atmospheric turbulence, air current, wind velocity profile

ABSTRACT: This article discusses the results of measurement of the vertical components of wind velocity from an airplane. Data are presented on the change in velocity and the horizontal extent of vertical currents with height. In 1960, the Glavnaya geofizicheskaya observatoriya (Main Geophysical Observatory) investigated the influence of the water surface of Lake Ladoga on the coastal regions. The meteorological apparatus carried aboard an LI-2 aircraft included a vertical current meter for registering the velocity of the vertical currents on an oscillogram during horizontal flight of the aircraft with a mean air speed of 220 km/hour. The plane flew

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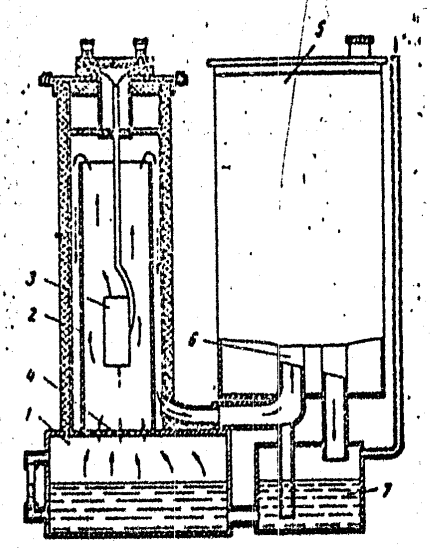
ACCESSION NR: AP4039810

ENCLOSURE: 01



1 -- vessel for boiling distilled water; 2 -- measuring chamber; 3 -- thermometer; 4 -- grid; 5 -- refrigerator; 6 -- coil; 7 -- sedimentation tank

Card 3/3

ACCESSION NR: AP4039810

SUBMITTED: 22Oct62 DATE ACQ: 19 Jun 64 ENCL: 01

SUB CODE: ES NO REF SOV: 000 OTHER: 000

Card 2/3

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100020-6

WRITE BELOW THIS LINE

S/0286/64/000/010/0067/0067

ACCESSION NR: AP4039810

AUTHOR: Zaytsev, V. A.; Ledokhovich, A. A.

TITLE: A hypsometer. Class 42, No. 162689

SOURCE: Byul. izobr. i tovar. znakov, no. 10, 1964, 67

TOPIC TAGS: hypsometer, altitude determination, altitude measurement, hypsometry, hypsography, height measurement, height determination, geodesy

ABSTRACT: This author's certificate introduces a hypsometer made in the form of a boiler which contains a vessel for boiling distilled water, a measurement chamber with a thermometer bulb and a grid for protecting the internal cavity of the chamber from a water explosion. In order to widen the range of pressure measurements and to assure continuity in the operation of the device, a refrigerator with a coil and sedimentation tank is connected to the water boiler. This refrigerator and the boiler form together a closed steam circulation system.

ASSOCIATION: none

Card 1/3

ZAYTSEV, V.A., kand. tekhn. nauk; [illegible], M.O., kand. tekhn. nauk; [illegible], D.N., kand. tekhn. nauk; BAKALEYNIK, A.M., inzh.

Effect of functional additives to manganese antiknock compound on the wear and scale formation in an engine. Khim. i tekhn. topl. i prim. avt. top. smaz. mat. i spetszhid. no.3:5-[illegible] 1961.

Evaluating the effect of additives to gasoline on the performance of spark plugs. Ibid.:9-15

(MIRA 17:3)

ZAYTSEV, V.A.; ZORIN, V.G.

Methodology for quantitative analysis of pharmaceutical preparations containing tertiary nitrogen. Report No.2: Turbidimetric titration. Apt. delo 13 no.3:31-35 My-Je '64. (MIRA 18:3)

1. Tsentral'nyy aptechnyy nauchno-issledovatel'skiy institut, Moskva.

ZAYTSEV, Vitaliy Alekseyevich; NIKOLAYEV, Sergey Nikolayevich; YENYUTIN, V.V., red.

[Concise manual on electron tubes] Kratkii spravochnik po elektrovakuumnym priboram. Moskva, Izd-vo "Znanie," 1965. 78 p. (Massovaia radiobiblioteka, no.583)
(MIRA 18:11)

The influence of CTM (cyclopentadienyl tricarbonyl ...

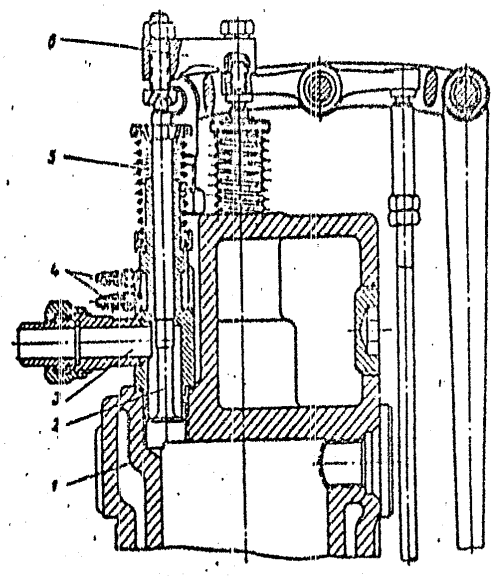


Figure 5: Scheme of the soot-collecting valve setup in the cylinder head of the engine ИТ 9-2 (IT 9-2): 1 - cylinder head; 2 - soot-collecting valve; 3 - outlet of exhaust gases; 4 - coolant supply to the valve sleeve; 5 - valve spring; 6 - valve drive.

Card 3/3

The influence of CTM (cyclopentadienyl tricarbonyl ...

and sludges in automobile engines), Mashgiz, 1956] to evaluate sooting of Diesel fuels failed when it was used to examine the efficiency of metal and metal oxide removing agents. For this purpose, a soot-collecting valve was developed (Fig. 5). The quantity of soot on the valve was found to increase with the concentration of the antiknock, with CTM giving less soot than R-9. When, for instance, 1 g of CTM (0.27 g of metal) was contained in 1 kg of fuel, sooting was increased by 93% as compared to the gasoline containing no additive. When dichloroethane and ethyl bromide, respectively, were added in stoichiometric quantities (100%) to gasoline A-72 containing 1 g of CTM, sooting was reduced to 24 and 38%, respectively. If the concentration of the antiknock is further increased, the quantity of soot decreases and approaches that of antiknock-free gasoline. Halide-base removing agents are more efficient in the manganese-containing antiknock than in the lead-containing one. Thus, it has been shown that the new manganese antiknock produces less sooting than tetraethyl lead. There are 3 figures.

Card 2/3

S/890/61/000/002/004/007
A059/A126

AUTHORS: Lerner, M.O., Engineer, Zaytsev, V.A., Aronov, D.M., - Candidates of Technical Sciences

TITLE: The influence of CTM (cyclopentadienyl tricarbonyl manganese) on sooting in the engine

SOURCE: Moscow. Nauchno-issledovatel'skiy institut avtomobil'nogo transporta. Ekspluatatsionno-tekhnicheskiye svoystva i primeneniye avtomobil'nykh topliv, smazochnykh materialov i spetszhidkostey. no. 2, 1961, 24 - 28

TEXT: The influence of CTM and ethylfluid P-9 (R-9) concentrations, respectively, on sooting with the motor gasoline A-72 (A-72) and the efficiency of hydrocarbon halides on the removal of manganese and its oxides from the combustion chamber have been examined. Antiknock-containing gasoline was tested by weighing the soot formed on the surface of a plug screwed into the combustion chamber. The method developed by K.K. Papok and collaborators [Nagary, lakovyye otlozheniya i osadki v automobil'nykh dvigatelyakh (Soots, deposited coatings,

Card 1/3

New antiknocks

clopentadiamide compounds of metals and related compounds). Uspekhi khimii, XXVII, vyp. 1, 1958].

S/890/61/000/002/002/007
A059/A126

AUTHORS: Lerner, M.O., Engineer, Zaytsev, V.A., Aronov, D.M., - Candidates of Technical Sciences

TITLE: New antiknocks

SOURCE: Moscow. Nauchno-issledovatel'skiy institut avtomobil'nogo transporta. Ekspluatatsionno-tekhnicheskiye svoystva i primeneniye avtomobil'nykh topliv, smazochnykh materialov i spetszhidkostey. no. 2, 1961, 17 - 18

TEXT: Antiknocks based on the dicyclopentadienyl derivatives of metals were found to be equivalent to or exceeding the efficiency of tetraethyl lead. From these compounds, cyclopentadienyl tricarbonyl manganese (CTM) and its methyl derivative (MTCM) were the most outstanding. The antiknock AK-33X (AK-33Kh) based on the latter is also of interest. The toxicity of these antiknocks was experimentally established to be insignificant. The physicochemical properties of many such compounds were described by A.N. Nesmeyanov and Ye.G. Perevalova [Tsiklopentadiamidnyye soyedineniya metallov i rodstvennyye im soyedineniya (Cy-

Card 1/2

Antiknock properties of CTM ....

tures consisting of n-heptane (40% by volume) and one of the following hydrocarbons: iso-octane, benzene, cyclohexane, and di-isobutylene. Equal response to both CTM and ethylfluid R-9 has been established in all cases. The response of cyclohexane and benzene to CTM was lower than that with iso-octane, while that of di-isobutylene was minimal. In all cases, CTM was more efficient than R-9 in the two technical-grade gasolines A-56 (A-56) and A-72 (A-72) with the response of the latter to both antiknocks being less than that of the former. The octane number of methyl cyclopentadienyl tricarbonyl manganese determined with the research test method is nearly equal to that of CTM. Ethyl bromide in gasoline A-72 containing CTM is less efficient in reducing the octane number of CTM than is dichloroethane. CTM was experimentally shown to be more efficient than tetraethyl lead, and is highly efficient particularly in promoting the response of the fuels. There are 3 figures and 3 tables.

Card 2/2

S/890/61/000/002/003/007
A059/A126

AUTHORS: Lerner, M.O., Engineer, Zaytsev, V.A., Aronov, D.M., Candidates of Technical Sciences, Malanichev, S.G., Engineer (Deceased)

TITLE: Antiknock properties of CTM (cyclopentadienyl tricarbonyl manganese)

SOURCE: Moscow. Nauchno-issledovatel'skiy institut avtomobil'nogo transporta. Ekspluatatsionno-tekhnicheskiye svoystva i primeneniye avtomobil'nykh topliv, smazochnykh materialov i spetszhidkostey, no. 2, 1961, 18 - 22

TEXT: The increase in the octane number of technical-grade motor gasoline and mixtures of the individual hydrocarbons was determined in dependence on the CTM and ethylfluid P-9 (R-9) concentrations, respectively, together with the knock-promoting efficiency of hydrocarbon halides (dichloroethane and ethylene bromide) added to ethylfluid to remove completely the metal from the cylinder. The octane numbers were determined with the standard setups ИТ 9-2 (IT 9-2) (motor tests) and ИТ 9-6 (IT 9-6) (research tests), respectively. The response of various types of hydrocarbons to CTM and ethylfluid R-9 was examined with mix-

Card 1/2

Thermal decomposition of ...

but only NH_3 is liberated. At 460°C, mainly liberation of F can be observed. Thus, HUF_5, which is unknown in aqueous solution, should be stable between 280-460°C. There are 1 figure, 1 table, and 7 references: 1 Soviet and 6 non-Soviet. The three most recent references to English-language publications read as follows: J. Impe Van, Chem. Engng. Progr., 50, no. 5, 230 (1954); H. Bernhardt et al., Nucl. Sci. Abstrs, 10, 792 (1956); V. Dadape, N. Krishna Prasad, Paper no. 1688, submitted by India on the Second International Conference on the Peaceful Use of Atomic Energy (Geneva, 1958).

SUBMITTED: February 1, 1961

Card 2/2

X

S/089/61/011/006/014/014
B101/B102

21.4200

AUTHORS: Galkin, N. P., Sudarikov, B. N., Zaytsev, V. A.

TITLE: Thermal decomposition of ammonium uranium pentafluoride

PERIODICAL: Atomnaya energiya, v. 11, no. 6, 1961, 554-555

TEXT: This report is a continuation of the authors' studies on the reaction of UF_6 with NH_3 (Atomnaya energiya, v. 8, no. 6, 530 (1960)). UF_6 is partly reduced by NH_3 at 100-200°C, with NH_4UF_5 being formed which contains up to 10% of free NH_4F. Thermographic analysis rendered three endothermic effects: at 220-280°C (loss in weight 9.4%), 320-360°C (loss in weight 5.9%), and 420-450°C (loss in weight 4.2%). The product calcined above 450°C is UF_4. This gradual separation of NH_4F was now investigated by analysis of the gases formed in thermal dissociation. Calcination was conducted 2 hr in an argon flow at 280, 360, and 460°C. Results: Free NH_4F is quantitatively eliminated at 280°C accompanied by partial NH_4UF_5 decomposition, NH_3 being liberated predominantly. At 360°C, almost no F

Card 1/2

89356

S/089/61/010/002/006/018
B102/B209

Methods of uranium ...

Reaction temperature °C	thermal effect, kcal/mole UF_6
-50	50.8 ± 1.5
-40	67.0 ± 2.0
-30	83.6 ± 2.5

Furthermore, reduction by trichloro-ethylene and by carbon tetrachloride is discussed; again, the material is taken from western literature. [Abstracter's note: The papers listed under "Soviet References" are all, except one, American lectures read at the Second Geneva Atomic Conference (1959) and one translation of a book, all published in Moscow]. There are 5 figures, 4 tables, and 22 references: 8 Soviet-bloc and 11 non-Soviet-bloc.

SUBMITTED: February 8, 1960

Card 3/3

Methods of uranium ...

a more detailed discussion of UF_6 reduction by hydrogen; the material is taken from western publications as well. Reaction temperature, effect of time on the reduction, reduction on an industrial scale, and description of the two basic methods, viz. reactor with hot and with cold walls, are dealt with. Reduction by ammonia is discussed afterwards. In this case, the authors consult results of a paper of their own (Atomnaya Energiya, Vol. 8, p. 530) and data of western origin. They had investigated the composition of the reaction products between -50 and 200°C and assumed the following comprising reaction equations:

$-50 - -30^{\circ}C : 6UF_6 + (8+6n)NH_3 \longrightarrow 6UF_5 \cdot nNH_3 + 6NH_4F + N_2$, where n=0.73;

$0 - 25^{\circ}C : 4UF_6 + 8NH_3 \longrightarrow 2UF_5 + 2NH_4UF_5 + 4NH_4F + N_2$;

$100 - 200^{\circ}C : 3UF_6 + 8NH_3 \longrightarrow 3NH_4UF_5 + 3NH_4F + N_2$.

The reaction rate which decreased with temperature was estimated. At -20°C the reaction was over after 3 - 5 min. The following data were obtained for the thermal effect at still lower temperatures:

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TITLE: Methods of uranium hexafluoride reduction

PERIODICAL: Atomnaya energiya, v. 10, no. 2, 1961, 149-155

TEXT: On the basis of publications, the present paper gives a synopsis on the various methods of UF_6 reduction and reduction energies. Hydrogen, hydrogen chloride, carbon tetrachloride, ammonia, ethylene, propane, trichloro-ethylene, sulfur dioxide, silicon tetrachloride, thionyl chloride and other substances are known as reducers on uranium tetrafluoride; hydrogen, carbon tetrachloride, hydrogen chloride, trichloro-ethylene, and ammonia appear to be the most suitable ones. The free energy of some reduction reactions are listed in Table 1. The free energy of UF_6 reduction decreases in the sequence HCl, CCl_4, HBr, H_2 whereas the thermal effect of the reaction and the chemical affinity of the reacting substances increase. First, reduction by hydrogen chloride is discussed. The data are taken from a western paper and a US patent. The following section is devoted to

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GALKIN, N.P.; SUDARIKOV, B.N.; ZAYTSEV, V.A.; VIASOV, D.A.; KOSAREV, V.G.

Properties of uranium hexafluoride in organic solvents. Atom. energ. 10 no.2:143-148 F '61. (MIRA 14:1)
(Uranium fluoride)

ZAYTSEV, V.A.; GRIVKOVA, A.I.; PCHELINTSEVA, G.M., red.; VLASOVA, N.A., tekhn. red.

[Cs^{137}, a radioactive isotope of cesium] Radioaktivnyi izotop tseziia - Cs^{137}. Moskva, Gos.izd-vo lit-ry v oblasti atomnoi nauki i tekhniki, 1961. 28 p. (MIRA 14:12)
(Cesium--Isotopes)

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Interaction Between Uranium Hexafluoride and Ammonia

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B006/B063

The entire reaction within the range -50 - -30°C can thus be described by equation $6UF_6 + (8+6n)NH_3 \longrightarrow UF_5 nNH_3 + 6NH_4F + N_2$, where n = 0.73. The following equations hold in the ranges 0 - +25°C and 100 - 200°C, respectively: $4UF_6+8NH_3 \longrightarrow 2UF_5+2NH_4UF_5+4NH_4F + N_2$ and $3UF_6+8NH_3 \longrightarrow 3NH_4UF_5+3NH_4F+N_2$. The calculated values are all compared with the experimental ones. The thermal effect observed between -50 and -30°C varies from 50.8 to 83.6 kcal/mole (cf. Table 2); at -40°C, it coincides with the value calculated from the reaction equation. Within the range -20 to +20°C, the reaction rate was measured as a time function (Fig.4). The functions (-20°, 0°, +20°C) are hyperbolic. There are 4 figures, 5 tables, and 9 references: 3 Soviet, 1 US, 2 German, and 1 British.

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